



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT

In re Application of:	MacDonald, et al.	Attorney Docket No:	KCX-665 (19232)
Serial No:	10/686,933	Date:	February 17, 2004
Filed:	October 16, 2003	Art Unit:	1744
Confirmation No:	4589	Our Customer ID:	22827
Title:	Method For Reducing Odor Using Colloidal Nanoparticles	Our Account No:	04-1403

Commissioner for Patents
U.S. Patent and Trademark Office
Post Office Box 1450
Alexandria, VA 22313-1450

Sir:

The following is an Information Disclosure Statement for the captioned patent application, pursuant to 37 CFR Sections 1.56, 1.97, and 1.98.

1. ☒ Attached hereto is:

- a. ☒ A list of materials for consideration per Rule 98(a)(1): 5 page(s)
- b. ☒ A legible copy of each patent, publication, or other item listed per Rule 98(1)(2), unless not required per Rule 98 and/or as indicated on the attached list(s):
147 item(s)
- c. ☐ For each non-English language item listed, pursuant to Rule 98(a)(3), a concise explanation of the relevance thereof as it is presently understood by the individual designated in Rule 56(c) most knowledgeable about the content of such items: _____

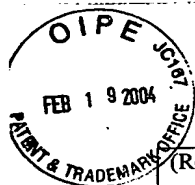
☐ Such explanation is provided in the Search Report from a corresponding application enclosed herewith along with any enclosed translation into English.

2. ☒ This Information Disclosure Statement is being filed [CHECK ONE]:

- a. ☒ WITHIN THREE MONTHS of the application filing date, national stage date of entry, or along with or after a request for continued examination, OR BEFORE the mailing date of a first Office Action on the merits, which ever event occurs last, WHEREFORE per Rule 97(b) NO filing fee or Rule 97(e) certificate is required.
- b. ☐ AFTER the time periods of section 2.a above, but BEFORE a Final Action, Notice of Allowance OR an action that otherwise closes prosecution, WHEREFORE PER Rule 97(c) submitted herewith is [CHECK ONE]:
- i. ☐ Certification per Rule 97(e); OR
- ii ☐ Filing Fee per Rule 17(p)\$180.00
- c. ☐ AFTER a Final Action OR Notice of Allowance, but BEFORE payment of the issue fee, WHEREFORE per Rule 97(d) submitted herewith is:
- i. Certification per Rule 97(e); AND
- ii. Filing fee per Rule 17(p)\$180.00

3. ☐ Rule 97(e) Certification; per Rule 97(e), the undersigned certifying party make the following certification statement [CHECK ONE]:

- a. ☐ That each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement; OR
- b. ☐ That no item of information contained in this Information Disclosure Statement was cited in a foreign patent office in a counterpart foreign application and to the knowledge of the undersigned after making a reasonable inquiry, was known to any individual designated in Rule 56(c) more than three months prior to the filing of this statement.



(Rev. 5/92) Information Disclosure Statement List By Applicant(s) Under 37 CFR Section 1.98(a) (1) (Use several sheets if necessary)	Attorney Docket Number: KCX-665 (19232)	Serial Number: 10/686,933
	Applicant: MacDonald, et al.	
	Filing Date: October 16, 2003 Confirmation No: 4589	Group Art Unit: 1744

- NOTE: If no indication is made in the column marked "COPY NOTE," the required legible copy of the corresponding item is submitted herewith; otherwise, a copy is not required and/or not submitted, for the following reason(s) [corresponding reason number is listed in "COPY NOTE" column]"
- (1) This item is cumulative, per Rule 98(c)
 - (2) A copy of this item was previously cited by or submitted to the U.S. Patent and Trademark Office in:
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 USSN _____, filed _____;
 Relied on under 35 U.S.C. Section 120, per Rule 98(d)
 - (3) Both reasons (1) and (2) apply
 - (4) No legible complete copy is possessed, in custody of controlled, or readily available
 - (5) Per the U.S. Patent and Trademark Office's waiver of Rule 98(a)(2)(i), the item is a U.S. patent or patent application publication, and the present application was filed after June 30, 2003.

U.S. PATENT DOCUMENTS											
EXAMINER INITIALS	PATENTEE NAME	PATENT NUMBER								ISSUE DATE	COPY NOTE
	Brandt, et al.	R	E	3	2	6	4	9		04/19/1988	5
	Kinney	3	3	3	8	9	9	2		08/29/1967	5
	Kinney	3	3	4	1	3	9	4		09/12/1967	5
	Evans	3	4	9	4	8	2	1		02/10/1970	5
	Petersen	3	5	0	2	5	3	8		03/24/1970	5
	Hartmann	3	5	0	2	7	6	3		03/24/1970	5
	Dobo, et al.	3	5	4	2	6	1	5		11/24/1970	5
	Dorschner, et al.	3	6	9	2	6	1	8		09/19/1972	5
	Matsuki, et al.	3	8	0	2	8	1	7		04/09/1974	5
	Butin, et al.	3	8	4	9	2	4	1		11/19/1974	5
	Suzuki, et al.	3	9	7	1	6	6	5		07/27/1976	5
	Yoshida, et al.	4	0	0	6	0	3	0		02/01/1977	5
	Yoshida, et al.	4	0	7	8	0	2	9		03/07/1978	5
	Anderson, et al.	4	1	0	0	3	2	4		07/11/1978	5
	Inoue, et al.	4	1	0	1	6	3	8		07/18/1978	5
	Boulton	4	1	4	4	3	7	0		03/13/1979	5
	Appel, et al.	4	3	4	0	5	6	3		07/20/1982	5
	Pedersen, et al.	4	4	6	7	0	1	2		08/21/1984	5
	Byrne, et al.	4	5	7	5	5	5	6		03/11/1986	5
	McFarland, et al.	4	6	0	4	3	1	3		08/05/1986	5
	McFarland, et al.	4	6	5	5	7	5	7		04/07/1987	5
	Barker, et al.	4	7	0	1	2	1	8		10/20/1987	5
	Ota, et al.	4	7	1	5	9	8	3		12/29/1987	5
	Broecker, et al.	4	7	8	0	4	4	8		10/25/1988	5
	Mizukami, et al.	4	7	8	1	8	5	8		11/01/1988	5
	Gamble, et al.	4	7	8	3	2	2	0		11/08/1988	5
	Meyer, et al.	4	7	9	8	6	0	3		01/17/1989	5
	Hubbard, et al.	4	8	0	2	4	7	3		02/07/1989	5
	Watanabe, et al.	4	9	0	4	3	0	4		02/27/1990	5
	Hubbard, et al.	4	9	6	9	4	5	7		11/13/1990	5
	Watanabe, et al.	4	9	8	8	5	0	5		01/29/1991	5
	Hubbard, et al.	5	0	2	0	5	3	3		06/04/1991	5
	Johnson, et al.	5	0	5	7	3	0	2		10/15/1991	5
	Kubo, et al.	5	0	6	4	4	7	3		11/12/1991	5
	Watanabe, et al.	5	1	0	0	5	8	1		03/31/1992	5
	Maeda, et al.	5	1	0	0	7	0	2		03/31/1992	5
	Moffatt	5	1	3	3	8	0	3		07/28/1992	5

(Rev. 5/92) Information Disclosure Statement List By Applicant(s) Under 37 CFR Section 1.98(a) (1) (Use several sheets if necessary)	Attorney Docket Number: KCX-665 (19232)	Serial Number: 10/686,933
	Applicant: MacDonald, et al.	
	Filing Date: October 16, 2003 Confirmation No: 4589	Group Art Unit: 1744

	Winnik, et al.	5	1	4	5	5	1	8	09/08/1993	5
	Watanabe, et al.	5	1	9	6	1	7	7	03/23/1993	5
	Kavassalis, et al.	5	2	0	9	9	9	8	05/11/1993	5
	Theodoropoulos	5	2	2	0	0	0	0	06/15/1993	5
	Watanabe, et al.	5	2	2	1	4	9	7	06/22/1993	5
	Fare, et al.	5	2	2	5	3	7	4	07/06/1993	5
	Tsugeno, et al.	5	2	3	0	9	5	3	07/27/1993	5
	Okubi, et al.	5	2	3	8	5	1	8	08/24/1993	5
	Tsugeno, et al.	5	2	6	6	2	8	9	11/30/1993	5
	Everhart, et al.	5	2	8	4	7	0	3	02/08/1994	5
	Subramanian	5	2	9	2	8	6	8	03/08/1994	5
	Theodoropoulos	5	2	9	4	7	1	7	03/15/1994	5
	Brunson	5	3	2	2	0	6	1	06/21/1994	5
	Okubi, et al.	5	3	3	2	4	3	2	07/26/1994	5
	Takagi, et al.	5	3	3	8	7	1	3	08/16/1994	5
	Abe, et al.	5	3	4	2	8	7	6	08/30/1994	5
	Georger, et al.	5	3	5	0	6	2	4	09/27/1994	5
	Pike, et al.	5	3	8	2	4	0	0	01/17/1995	5
	Hubbard, et al.	5	3	8	3	4	5	0	01/24/1995	5
	Law, et al.	5	3	9	7	6	6	7	03/14/1995	5
	Ando, et al.	5	4	0	7	6	0	0	04/18/1995	5
	Spencer, et al.	5	4	2	0	0	9	0	05/30/1995	5
	Trinh, et al.	5	4	2	9	6	2	8	07/04/1995	5
	Tsugeno, et al.	5	4	5	8	8	6	4	10/17/1995	5
	Spencer, et al.	5	4	8	7	9	3	8	01/30/1996	5
	Subramanian, et al.	5	4	8	8	1	2	6	01/30/1996	5
	Yamazaki	5	5	3	8	5	4	8	07/23/1996	5
	Ando, et al.	5	5	4	7	6	0	7	08/20/1996	5
	Reese, et al.	5	5	5	3	6	0	8	09/10/1996	5
	El-Shall, et al.	5	5	8	0	6	5	5	12/03/1996	5
	Subramanian, et al.	5	5	8	3	2	1	9	12/10/1996	5
	Barthel, et al.	5	5	9	1	7	9	7	01/07/1997	5
	Watanabe, et al.	5	5	9	7	5	1	2	01/28/1997	5
	Inatani, et al.	5	6	6	1	1	9	8	08/26/1997	5
	Bishop, et al.	5	6	7	9	1	3	8	10/21/1997	5
	Sacripante, et al.	5	6	7	9	7	2	4	10/21/1997	5
	Kuhn, et al.	5	7	7	3	2	2	7	06/30/1998	5
	Baird, et al.	5	8	1	3	3	9	8	09/29/1998	5
	Calvo Salve, et al.	5	8	4	3	5	0	9	12/01/1998	5
	Everhart, et al.	5	8	5	5	7	8	8	01/05/1999	5
	Kamoto, et al.	5	8	8	0	1	7	6	03/09/1999	5
	Suzuki, et al.	5	8	8	0	3	0	9	03/09/1999	5
	Tasaki, et al.	5	9	0	2	2	2	6	05/11/1999	5
	Fujiki, et al.	5	9	0	5	1	0	1	05/18/1999	5
	Desai, et al.	5	9	1	6	5	9	6	06/29/1999	5
	Grandfils, et al.	5	9	6	2	5	6	6	10/05/1999	5
	Shell, et al.	5	9	7	2	3	8	9	10/26/1999	5
	Yamada, et al.	5	9	8	5	2	2	9	11/16/1999	5
	Abe, et al.	5	9	8	9	5	1	0	11/23/1999	5
	Watanabe, et al.	5	9	8	9	5	1	5	11/23/1999	5
	Kasai, et al.	6	0	0	7	5	9	2	12/28/1999	5
	Gore	6	0	2	4	7	8	6	02/15/2000	5
	Guarracino, et al.	6	0	9	6	2	9	9	08/01/2000	5
	Spencer, et al.	6	1	7	2	1	7	3	01/09/2001	5
	Law, et al.	6	1	9	0	8	1	4	02/20/2001	5
	Guarracino, et al.	6	2	2	5	5	2	4	05/01/2001	5
	Watanabe, et al.	6	2	9	1	5	3	5	09/18/2001	5
	Anderson, et al.	6	3	1	5	8	6	4	11/13/2001	5
	Gallis, et al.	6	3	3	4	9	8	8	01/01/2002	5
	Oldenburg, et al.	6	3	4	4	2	7	2	02/05/2002	5
	Hoshino, et al.	6	3	5	8	5	3	7	03/19/2002	5

(Rev. 5/92) Information Disclosure Statement List By Applicant(s) Under 37 CFR Section 1.98(a) (1) (Use several sheets if necessary)	Attorney Docket Number: KCX-665 (19232)	Serial Number: 10/686,933
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	Guarracino, et al.	6	3	7	6	7	4	1	04/23/2002	5
	Reeves, et al.	6	3	8	7	4	9	5	05/14/2002	5
	Ota, et al.	6	3	9	8	8	2	7	06/04/2002	5
	Wellinghoff, et al.	6	4	1	0	7	6	5	06/25/2002	5
	Blackstock, et al.	6	4	2	7	6	9	3	08/06/2002	5
	Woltman, et al.	6	4	3	3	2	4	3	08/13/2002	5
	Kasai, et al.	6	4	4	0	1	8	7	08/27/2002	5
	Furuya, et al.	6	4	6	1	7	3	5	10/08/2002	5
	Sakaguchi, et al.	6	4	6	8	5	0	0	10/22/2002	5
	Tan, et al.	6	5	4	8	2	6	4	04/15/2003	5
	Maeda, et al.	6	5	6	2	4	4	1	05/13/2003	5
	Raymond, et al.	6	4	7	8	5	2	1	06/17/2003	5

U.S. PATENT APPLICATION PUBLICATIONS										
EXAMINER INITIALS	APPLICANT'S NAME	PUBLICATION NUMBER							PUBLICATION DATE	COPY NOTE
	Nohr, et al.	0	0	2	1	9	8	3	01/30/2003	5
	Kolb, et al.	0	1	2	8	3	3	6	09/12/2002	5
	Carter, et al.	0	1	4	2	9	3	7	10/03/2002	5
	Nohr, et al.	0	1	4	9	6	5	6	10/17/2002	5
	Cramer, et al.	0	1	5	0	6	7	8	10/17/2002	5
	MacDonald	0	2	0	3	0	0	9	10/30/2003	5

FOREIGN PATENT DOCUMENTS														
EXAMINER INITIALS		COUNTRY	DOCUMENT NUMBER							PUBLICATION DATE	TRANSLATION			COPY NOTE
											YES	NO	N/A	
		WO	0	0	0	3	7	9	7	A1	01/27/2000		X	
		EP	0	1	0	3	2	1	4	B1	03/21/1984			X
		WO	0	1	0	6	0	5	4	A1	01/25/2001			X
		WO	0	2	0	5	5	1	1	5 A1	07/18/2002			X
		EP	0	2	8	2	2	8	7	B2	09/14/1988			X
		EP	0	3	3	9	4	6	1	B1	11/02/1989			X
		EP	0	3	7	6	4	4	8	B1	07/04/1990			X
		EP	0	3	8	9	0	1	5	A2 A3	09/26/1990			X
		EP	0	3	8	9	0	2	3	A2 A3	09/26/1990			X
		EP	0	4	8	3	5	0	0	A1	05/06/1992			X
		EP	0	7	4	9	2	9	5	B1	12/27/1996			X
		EP	0	9	7	2	5	6	3	A1	01/19/2000			X
		WO	9	8	2	0	9	1	5	A1	05/22/1998		X	
		WO	9	9	4	7	2	5	2	A3	09/23/1999			X

*"NO" means that no copy of an English language translation is within the possession, custody, or control of, or is readily available to any individual designated in Rule 56(c).

(Rev. 5/92) Information Disclosure Statement List By Applicant(s) Under 37 CFR Section 1.98(a) (1) (Use several sheets if necessary)	Attorney Docket Number: KCX-665 (19232)	Serial Number: 10/686,933
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EXAMINER INITIALS	OTHER DOCUMENTS	COPY NOTE
	Specify author (if any), Title, Pertinent Pages, Date & Place of Publication	
	Article – <i>Saponins and Sapogenins. VIII. Surface Films of Echinocystic Acid and Derivatives</i> , C. R. Noller, J. Am. Chem. Soc., Vol. 60, 1938, 3 pages	
	Article – <i>Synthesis of porous Silica with help from cyclodextrin aggregates</i> , Markus Antonietti, Max-Planck-Institut für Kolloid- und, Germany, 1 page	
	Article – <i>Immobilization of (n-Bu₄N)₄W₁₀O₃₂ on Mesoporous MCM-41 and Amorphous Silicas for Photocatalytic Oxidation of Cycloalkanes with Molecular Oxygen</i> , Andrea Maldotti, Alessandra Molinari, Graziano Varani, Maurizio Lenarda, Loretta Storaro, Franca Bigi, Raimondo Maggi, Alessandro Mazzacani, and Giovanni Sartori, Journal of Catalysis, Vol. 209, 2002, pp. 210-216	
	Article – <i>Fe-MCM-41 for Selective Epoxidation of Styrene with Hydrogen Peroxide</i> , Qinghong Zhang, Ye Wang, Satoko Itsuki, Tetsuya Shishido, and Katsuomi Takehira, The Chemical Society of Japan, Chemistry Letters 2001, pp. 946-947	
	Article – <i>Mesoporous Sieves with Unified Hybrid Inorganic/Organic Frameworks</i> , Brian J. Melde, Brian T. Holland, Christopher F. Blanford, and Andreas Stein, Chem. Mater., Vol. 11, No. 11, 1999, pp. 3302-3308	
	Article – <i>From Cyclodextrin Assemblies to Porous Materials by Silica Templating</i> , Sebastian Polarz, Bernd Smarsly, Lyudmila Bronstein, and Markus Antonietti, Angew. Chem. Int., Vol. 40, No. 23, 2001, pp. 4417-4421	
	Paper – <i>Uniform Deposition of Ultrathin Polymer Films on the Surfaces of Al₂O₃ Nanoparticles by a Plasma Treatment</i> , Donglu Shi, S. X. Wang, Wim J. van Ooij, L. M. Wang, Jiangang Zhao, and Zhou Yu, University of Cincinnati and University of Michigan, June 2000, pp. 1-15	
	Article – <i>Development of novel dye-doped silica nanoparticles for biomarker application</i> , Swadeshmukul Santra, Kemin Wang, Rovelyn Tapeç, and Weihong Tan, Journal of Biomedical Optics, Vol. 6, No. 2, April 2001, pp. 160-166	

(Rev. 5/92) Information Disclosure Statement List By Applicant(s) Under 37 CFR Section 1.98(a) (1) (Use several sheets if necessary)	Attorney Docket Number: KCX-665 (19232)	Serial Number: 10/686,933
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	Article – <i>Nanoparticles based on polyelectrolyte complexes: effect of structure and net charge on the sorption capability for solved organic molecules</i> , H.-M. Buchhammer, G. Petzold, and K. Lunkwitz, Colloid Polym. Sci., Vol. 278, 2000, pp. 841-847		
	Article – <i>Adsorption of Gases in Multimolecular Layers</i> , Stephen Brunauer, P.H. Emmett, and Edward Teller, The Journal of the American Chemical Society, Vol. 60, February 1938, pp. 309-319		
	Article – <i>Study of the urea thermal decomposition (pyrolysis) reaction and importance to cyanuric acid production</i> , Peter M. Schaber, James Colson, Steven Higgins, Ed Dietz, Daniel Thielen, Bill Anspach, and Jonathan Brauer, American Laboratory, August 1999, pp. 13-21		
	Article – <i>The Colloid Chemistry of Silica</i> , American Chemical Society 200 th National Meeting, August 26-31, 1990, pp. 22-23 and pp. 52-59		
	Article – <i>Structure and properties of silica nanoclusters at high temperatures</i> , I. V. Schweigert, K. E. J. Lehtinen, M. J. Carrier, and M. R. Zachariah, The American Physical Society, Physical Review B, Vol. 65. No. 235410, pp. 1-9		
	Article – <i>Grafting of Poly(ethylenimine) onto Mesylated Cellulose Acetate, Poly(methyl methacrylate) and Poly(vinyl chloride)</i> , Christopher J. Biermann and Ramani Narayan, Carbohydrate Polymers, Vol. 12, 1990, pp. 323-327		
	Abstract of Article – <i>Non-hydrothermal synthesis of copper-, zinc- and copper-zinc hydrosilicates</i> , T. M. Yurieva, G. N. Kustova, T. P. Minyukova, E. K. Poels, A. Blik, M. P. Demeshkina, L. M. Plyasova, T. A. Krieger, and V. I. Zaikovskii, Materials Research Innovations, Vol. 5, No. 1, June 2001, pp. 3-11		
	Pocket Guide to Digital Printing, Frank Cost, Delmar Publishers, Albany, NY, ISBN 0-8273-7592-1, pp. 144-145		
	Product Information Sheets on Snowtex®, 6 pages		
EXAMINER		DATE CONSIDERED	
Examiner: initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include a copy of this form with the next communication to applicant.			

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: MacDonald, et al.

Docket No: KCX-665 (19232)

Serial No: 10/686,933

Group No: 1744

Confirmation No: 4589

Examiner: Unknown

Customer No: 22827

Filed: October 16, 2003

Date: February 17, 2004

For: Method For Reducing Odor Using Colloidal Nanoparticles

RELATED U.S. PATENT APPLICATIONS

ASSISTANT COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, VA 22313-1450

The following commonly assigned U.S. Patent Applications are being cited to the Examiner for review and consideration. Enclosed please find copies of these applications. Once the applications have been reviewed, it is requested that the Examiner place his or her initial to the left of the identified patents on the list document to indicate that the specific patent applications have been considered.

RELATED U.S. APPLICATIONS

<u>Examiner's Initial</u>	<u>Inventor</u>	<u>Serial Number</u>	<u>Filing Date</u>	<u>Title of Application</u>
_____	Lye, et al.	10/325,474 (KCX-636)	12/20/2002	Delivery System For Functional Compounds
_____	Quincy, III, et al.	10/328,730 (KCX-616)	12/23/2002	Odor Control Composition
_____	Wu, et al.	10/686,937 (KCX-692)	10/16/2003	Method For Reducing Odor Using Coordinated Polydentate Compounds
_____	Do, et al.	10/686,938 (KCX-694)	10/16/2003	Method For Reducing Odor Using Metal- Modified Silica Particles

_____	McGrath, et al. (KCX-666)	10/686,939	10/16/2003	Method For Reducing Odor Using Metal- Modified Particles
_____	MacDonald, et al.	10/686,687	10/16/2003	Durable Charged Particle Coatings And Materials
_____	Urlaub, et al.	10/687,004	10/16/2003	High Surface Area Material Blends For Odor Reduction, Articles Utilizing Such Blends And Methods Of Using Same
_____	MacDonald, et al.	10/687,269	10/16/2003	Odor Controlling Article Including A Visual Indicating Device For Monitoring Odor Absorption
_____	MacDonald, et al.	10/687,270	10/16/2003	Visual Indicating Device For Bad Breath
_____	Boga, et al.	10/687,327	10/16/2003	Method And Device For Detecting Ammonia Odors And Helicobacter Pylori Urease Infection
_____	Fish, et al.	10/687,425	10/16/2003	Odor Absorbing Extrudates